



# Reef Geeks™ Culture Guide

## Comprehensive Guide to Culturing Phytoplankton

Welcome to the Reef Geeks™ approach to phytoplankton culture.

This guide will walk you through a simple, repeatable method for growing healthy, stable phytoplankton using the **Reef Geeks™ Water Prep & Culture Series** and **Reef Geeks™ Phyto Factory XL™**

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### Initial Setup

#### **1** Sterilisation (Critical First Step)

**Products:** Reef Geeks™ CultureClean Pro

1. Wash the Reef Geeks™, Phyto Factory XL culture container thoroughly using warm water and mild detergent
2. Rinse well to remove all soap residue
3. Spray the container, lid, and any tools with CultureClean Pro
4. Allow a minimum 1-minute contact time, then air dry

 Proper sterilisation is essential to prevent contamination and culture crashes.

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#### **2** Aeration System Setup

1. Position the air pump above the culture container to prevent back siphoning. Alternatively, install a check valve for added safety
2. Run airline tubing from the pump to the airflow control valve
3. Insert the airline into the culture container
4. Adjust airflow to provide strong, continuous bubbling (no violent splashing)

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#### **3** Adding Starter Culture

- Gently add 500mL of Reef Geeks™ PurePhyto Pro starter culture to the sterilised container
- Avoid splashing or shaking at this stage

## 4 Preparing Culture Water

**Products:** Reef Geeks™ SteriMix Pro, Dechlor Pro

1. Prepare fresh culture water using:
  - R.O. water
  - Marine salt mixed to 30-35ppm
  - In a separate sterilised container
2. Sterilise the prepared water using Reef Geeks™ SteriMix Pro
  - 1mL per litre
  - Allow 5-10 minutes contact time
3. Neutralise using Reef Geeks™ Dechlor Pro
  - 1 mL per litre of water
  - Mix well and wait 1 minute
4. Fill the culture container to approximately 2/3 full
5. Adjust aeration to maintain a strong, even flow

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## 5 Nutrient Addition

**Product:** Reef Geeks™ PhytoGrow Pro

- Add 1mL per litre of culture volume
- Dose once at culture start
- Do not add additional nutrients during the initial growth phase

✓ **PhytoGrow Pro** provides balanced nutrients without overloading the culture.

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## 6 Lighting & Temperature

- Position a fluorescent or LED grow light close to the culture container
  - Do not allow the light to touch the container
- Set a timer for:
  - **16 hours ON**
  - **8 hours OFF**
- Maintain temperature between **20–26°C**

# Cultivation Phase

## 1 Observation

- The culture will begin light green and translucent
- Over time it will become darker and thicker
- Healthy cultures show steady colour deepening without foul smell

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## 2 Maintenance (After Initial Growth)

After 7 days:

1. Add 1ml PhytoGrow Pro per litre of total culture volume
2. Top up the container with freshly prepared, sterilised, and dechlorinated culture water
3. Fill to 30 mm below the container rim
4. This will dilute the culture slightly
5. Allow the culture to reconcentrate over the next 7–10 days

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## 3 Timing

- Cultures typically reach optimal density 7–10 days after dilution
- Colour should be dark green and opaque

# Harvest & Storage

## 1 Harvesting

1. Harvest **approximately 70%** of the dark green culture
2. Retain **30%** in the culture container as a starter for the next batch

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## 2 Ongoing Harvest Schedule

- Repeat harvesting weekly:
  - **70% harvested**
  - **30% retained**
  - **Start with a freshly sterilised container after 4 harvests**
- Always sterilise tools and containers using CultureClean Pro before each harvest

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## 3 Storage & Use

- Harvested phytoplankton is ready for:
  - Aquarium dosing
  - Coral feeding
- Store harvested phyto in the refrigerator
- Shake gently every few days to prevent settling

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## Additional Tips

- **Patience is key:** Growth starts slowly but accelerates rapidly
- **Watch the colour:** Dark green = healthy culture
- **Smell test:** Any foul or sulphur smell indicates contamination
- **When in doubt:** Start fresh using sterilised equipment and clean water
- **Start with a sterilised container after 4 harvests**

✓ Consistent sterilisation using the Reef Geeks™ workflow dramatically reduces crashes.

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## Reef Geeks™ Culture Workflow

 CultureClean Pro →  SteriMix Pro →  Dechlor Pro →  PhytoGrow Pro

Simple • Repeatable • Reef-safe